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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,797	01/22/2002	David Beach	CSHL-P03-010	7431

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FISH & NEAVE IP GROUP
ROPES & GRAY LLP
ONE INTERNATIONAL PLACE
BOSTON, MA 02110-2624

EXAMINER	
CHONG, KIMBERLY	
ART UNIT	**PAPER NUMBER**
1635	

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/055,797	BEACH ET AL.	
	Examiner	Art Unit	
	Kimberly Chong	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *83-108 and 111-124* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *83-108 and 111-124* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/10/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Application/Amendment/Claims

Applicant's response filed 08/11/2005 has been considered. Rejections and/or objections not reiterated from the previous office action mailed 2/19/2005 are hereby withdrawn. The following rejections and/or objections are either newly applied or are reiterated and are the only rejections and/or objections presently applied to the instant application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

With entry of the amendment filed on 8/11/2005, claims 83-108 and 111-124 are pending in the application. Applicant has canceled claims 109-110.

Priority

Applicant's claim for the benefit of the prior-filed application PCT/US01/08435 is acknowledged. Applicant argues the instant claims are entitled to a priority date of 03/16/2001. Applicant points to support in the specification of PCT/US01/08435 for the claims of the instant application however the prior-filed application PCT/US01/08435 does not provide sufficient support for a hairpin RNA comprises self-complementary sequences of 19 to 100 nucleotides.

Applicant, in the reply field 05/10/2006, points to page 3, lines 20-29 of the specification for application PCT/US01/08435 for support. Page 3, lines 20-29 provide support for a library of dsRNA to identify a particular phenotype in cells and does not provide support for a hairpin RNA comprising self-complementary sequences of 19 to

100 nucleotides. However, lines 18-19 on page 3 of the specification and claims 13-14 disclose a specific embodiment of a dsRNA wherein the dsRNA is at least 50 nucleotides in length and preferably 400-800 nucleotides in length. Further, the remaining pages Applicants points to as providing support for the instantly claimed invention do not in fact provide support for a hairpin RNA 19 to 100 nucleotides in length.

Therefore, the instant claims are accorded a priority date of 01/22/2002, the filing date of the instant application.

Double Patenting

The provisional rejection of claims 95-98 and 101 under the judicially created doctrine of double patenting over claims 25-28 of copending Application No. 10/350,798 is withdrawn as claims 25-28 of the '798 application were canceled.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 83-108 and 111-124 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 83 is drawn to a method for attenuating expression of one or more target gene comprising introducing into cells a library of single-stranded hairpin RNA species wherein each hairpin RNA species comprises self complementary sequences that form

duplex regions and which hybridize to a target gene and wherein each hairpin RNA is a substrate for RNAse III enzyme to "produce a double-stranded RNA product" and "if complementary to a target sequence", reduces expression of said gene. It is unclear how the hairpin RNA, which is already double-stranded can be cleaved to further produce a double-stranded product. Additionally, the method is attenuation of expression of one or more target genes by a hairpin RNA which hybridizes to a target gene and reduces expression "if complementary to a target sequence". The method recites the hairpin RNA hybridizes to the target gene, therefore the hairpin RNA *is* complementary to the target gene because the only way a sequence can hybridize to another sequence is if the sequences are complementary. Claim 83 further recites the hairpin RNA reduces expression of said target gene in a manner dependent on the sequence of said complementary regions. It is unclear what "in manner dependent on the sequence" refers to when determining the reduction of expression of a target gene.

The rejection of claims 83-108 and 111-124 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 83-87, 90-98, 102-108, 111-115 and 120-124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fire et al. (US Patent Number 6,506,559) and Ui-Tei et al. (FEBS Letters 2000) as further evidenced by Zhang et al. (Cell, 2004, vol. 118, pages 57-68).

Claims 83-84 are drawn to a method of attenuating expression of a target gene in a mammalian cells comprising introducing into mammalian cells suspended in culture a library of single-stranded hairpin RNA wherein each hairpin RNA specie comprises self-complementary sequences of 20 to 100 nucleotides that form duplex regions and hybridize to a target gene and further is a substrate for cleavage by a RNase III enzyme, does not produce general sequence-independent killing and reduces expression of said target gene or a plurality of different target genes. Claims 85-87 recite the library of hairpin RNA are arrayed on a solid substrate or arrayed in wells of a multi-well plate and further identifying hairpin RNA which produce a detected phenotype. Claims 88-89 recite the promoter is a RNA polymerase promoter or a U6 promoter. Claims 90-94 recited the hairpin is chemically synthesized, is an in vitro transcription product, is transfected into mammalian cells, is microinjected into mammalian cells and wherein the expression cassette comprising a transcriptional regulatory sequence. Claim 95-98 recites the hairpin RNA comprising a RNA polymerase promoter, a bacteriophage promoter or a T7, T3 or SP6 promoter. Claims 101-108 and 111-115 recite the cells are stably transfected, expression of the target gene is attenuated by at least 33 or 90 percent relative to expression of cells not treated with the hairpin RNA and further wherein the target gene is an endogenous,

heterologous or pathogenic gene. Claims 116-119 recite the self-complementary sequence hybridizes to a non-coding region, or an untranscribed sequence. Claims 120-124 recite the self-complementary sequence of the hairpin RNA is 20-50 or 29 nucleotides in length.

Fire et al. disclose a method of attenuating expression of a target gene in mammalian cells (see column 8, lines 12-19) comprising a library of duplex RNA (see column 12, lines 49-54) wherein the RNA can be formed by a single self-complementary RNA or two complementary RNA strands (see column 7, lines 42-44) and wherein inhibition is sequence specific (see column 7, lines 49-52). Fire et al. teach the library of duplex RNA can be arrayed on a solid support or wells of a microtiter plate (see column 12, lines 55-61). Fire et al. additional teach the target gene is attenuated by at least 33 or 90 percent relative to expression of cells not treated with the RNA duplex, RNA duplex can comprise modifications to the phosphate-sugar backbone or nucleoside residues, the modifications can block the activity of adenosine deaminase (see column 7, line 14-39) and the RNA is a transcriptional product of a RNA polymerase, a bacteriophage RNA promoter or a T7, T3 or a SP6 promoter, has a resistance marker for stable transfection (see column 7, lines 5-15 and Figure 5A) and can be synthesized either in vivo or in vitro and has a transcriptional regulatory region (see column 8 to column 9). Fire et al. further discloses the target gene can be an endogenous gene or a pathogen (see column 6, lines 44-51) and the cells having the target gene may be from the germ cell line, somatic cell line, stem cell line or immortalized cell line (see column 8, line 12-62). Fire et al. teach the dsRNA be

targeted to intracellular regions or untranscribed regions of a target gene (see column 9). Fire et al. does not specifically disclose a nucleotide length of 19 to 100 and does not specifically teach an embodiment of attenuation of expression using a hairpin RNA in mammalian cells.

Ui-Tei et al. teach attenuation of expression in mammalian cells using dsRNA and teach the persistence of this attenuation for up to 6 days after mammalian cells were transfected with dsRNA (see page 82).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a hairpin RNA in a method of attenuating expression in mammalian cells.

One would have been motivated to use the method of attenuation of expression of one or more target genes for identification of functional genes in mammalian cells because Fire et al. teach experimental introduction of RNA into cells to interfere with the function of an endogenous gene and teach the methods of generation of dsRNA to target any gene and interfere with expression from any target gene using dsRNA and a library of dsRNA.

Although Fire et al. are silent as to the specific length of the dsRNAs, the long dsRNA molecules taught by Fire et al. were necessarily cleaved into duplexes between 20 to 100 nucleotides. As evidenced by the post-filing art of Zhang et al., Dicer is a multidomain ribonuclease that processes dsRNAs to 21 nt siRNAs during RNA interference. Zhang et al. teach that Dicer has one processing center and generates products 21 nucleotide siRNAs. As stated in the MPEP (see MPEP 2112), something

that is old does not become patentable upon the discovery of a new property. The claiming of an unknown property which is inherently present in the prior art does not necessarily make the claim patentable. There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of the invention, but only that the subject matter is in fact inherent in the prior art reference. This inherency argument is bolstered by *Schering Corp. v. Geneva Pharm. Inc.,* 339 F.3d 1373, 1377, 67USPQ2d 1664, 1668 (Fed. Cir. 2003). Inherent anticipation does not require recognition in the prior art. Since Fire et al. teach method of attenuating expression of a target gene in mammalian cells comprising a library of duplex RNA wherein the RNA can be formed by a single self-complementary RNA, and it has since been discovered that this effect is mediated by the activity of Dicer, which cleaves long dsRNA into 21 nt fragments, the teachings of Fire et al. anticipate the instant invention. Furthermore, see *Eli Lilly & Co. v. Barr Labs., Inc., 251* F.3d 955, 970, 58 USPQ2d 1865 (Fed. Cir. 2001), "a limitation or the entire invention is inherent and in the public domain if it is the "natural result flowing from" the explicit disclosure of the prior art". This is considered to inherently anticipate the compound even though the compound's existence was not known.

Finally, one would have a reasonable expectation of success because Fire et al. disclosed the methods of attenuating gene expression in any cells type using a hairpin RNA and clearly recognized the dsRNA and hairpin RNA interfere with gene expression and the applicability of these dsRNAs to identify functional genes in any cell. One

would further have a reasonable expectation of success because Ui-Tei et al. teach attenuation of expression using dsRNA in mammalian cells.

Thus in the absence of evidence to the contrary, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made.

Claims 83-98, 101-108, 111-124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fire et al. (US Patent Number 6,506,559), Ui-Tei et al. (FEBS Letters 2000) and Good et al. (Gene Therapy 1997) and as further evidenced by Zhang et al. (Cell, 2004, vol. 118, pages 57-68).

The rejection of claims 83-87, 90-98, 102-108, 111-115 and 120-124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fire et al. (US Patent Number 6,506,559) and Ui-Tei et al. (FEBS Letters 2000) are relied upon as above.

The claims are further drawn to the hairpin RNA wherein the hairpin RNA is a transcriptional product that is transcribed from an expression cassette comprising a RNA polymerase III promoter wherein said promoter is a U6 promoter.

Fire et al. and Ui-Tei et al. do not teach expression of a hairpin RNA from a cassette comprising a RNA polymerase III promoter wherein said promoter is a U6 promoter.

Good et al. teach an expression construct comprising a U6 promoter and a coding sequence for a hairpin RNA (see Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a hairpin RNA in a method of attenuating expression in mammalian cells.

One would have been motivated to use an expression construct comprising a U6 promoter because Good et al. specifically teach expression constructs comprising a U6 promoter efficiently transcribe hairpin RNAs, stabilize RNAs against degradation and direct the RNAs to the part of the cell where it can be most efficient (see Abstract).

Finally, one would have a reasonable expectation of success because Good et al. teach target specific attenuation of gene expression using hairpin RNA generated from an expression construct comprising a U6 promoter (see page 48).

Thus in the absence of evidence to the contrary, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made.

Claims 83-88, 90-108, 113-124 rejected under 35 U.S.C. 103(a) as being unpatentable over Lieber et al. (U.S. Patent No. 6,130,092) and Tuschl et al. (US 2002/0086356), Kennerdell et al. (Nature 2000) Fire et al. (US Patent Number 6,506,559) and Barber et al. (U.S. Patent No. 6,605,429).

Claims 83-84 are drawn to a method of attenuating expression of a target gene in a mammalian cells comprising introducing into mammalian cells suspended in culture a library of single-stranded hairpin RNA wherein each hairpin RNA specie comprises self-complementary sequences of 19 to 100 nucleotides that form duplex regions and

hybridize to a target gene and further is a substrate for cleavage by a RNase III enzyme, does not produce general sequence-independent killing and reduces expression of said target gene or a plurality of different target genes. Claims 85-87 recite the library of hairpin RNA are arrayed on a solid substrate or arrayed in wells of a multi-well plate and further identifying hairpin RNA which produce a detected phenotype. Claim 88 recite the promoter is a RA polymerase promoter. Claims 90-94 recited the hairpin is chemically synthesized, is an in vitro transcription product, is transfected into mammalian cells, is microinjected into mammalian cells and wherein the expression cassette comprising a transcriptional regulatory sequence. Claim 95-98 recites the hairpin RNA comprising a RNA polymerase promoter, a bacteriophage promoter or a T7, T3 or SP6 promoter. Claims 101-108 and 111-115 recite the cells are stably transfected, the expression of the target gene is attenuated by at least 33 or 90 percent relative to expression of cells not treated with the hairpin RNA and further wherein the target gene is an endogenous, heterologous or pathogenic gene. Claims 116-119 recite the self-complementary sequence hybridizes to a non-coding region, or an untranscribed sequence. Claims 120-124 recite the self-complementary sequence of the hairpin RNA is 20-50 or 29 nucleotides in length.

Lieber et al. teach a method of searching for a function gene comprising making randomized hammerhead ribozyme libraries and introducing hammerhead ribozyme libraries into mammalian cells, selecting cells into which the library expression systems were introduced and analyzing the phenotypes of the cells (see Figure 2 and columns 3 and 8 and claims 1-8). Lieber et al. teach the hammerhead ribozymes are is chemically

synthesized by transcription using expression cassettes comprising pol II or pol III promoters (see column 3). Lieber et al. do not teach a hairpin RNA expression library system comprising a double stranded RNA comprising self-complementary sequences 19-100 in length. Lieber et al. does not teach the expression cassette comprises inducible promoters and does not teach the library arrayed on a solid support or teach the library can be transfected or microinjected into cells and does not specifically teach modifications of the sugar backbone and nucleosides or modifications to inhibit inactivation by adenosine deaminase.

Tuschl et al. teach siRNA 19-25 nucleotides in length and teach dsRNA can be generated to target any gene for the attenuation of gene expression in any cell, specifically mammalian cells (see page 4). Tuschl et al. teach modifications of the dsRNA to increase stability and nuclease resistance. Tuschl et al. teach a specific embodiment of attenuation of expression of mammalian cells using dsRNA (see Figure 15). Tuschl et al. teach that siRNAs represent a new alternative to antisense or ribozyme therapeutics. Tuschl et al. does not specifically teach hairpin dsRNA.

Kennerdell teach hairpin loop RNA and teach incorporation of a hairpin in a dsRNA increase RNA interference (see page 897).

Fire et al. teach the target gene is attenuated by at least 33 or 90 percent relative to expression of cells not treated with the RNA duplex, RNA duplex can comprise modifications to the phosphate-sugar backbone or nucleoside residues, the modifications can block the activity of adenosine deaminase (see column 7, line 14-39)

It would have been obvious to one of ordinary skill in the art to incorporate a siRNA into the method of attenuation of gene expression. Further, it would have been obvious to one of ordinary skill in the art to incorporate hairpin loops into the siRNA to increase specificity and stability of the hairpin RNA and modifications to the hairpin RNA to increase stability, nuclease resistance and inactivation of the hairpin RNA.

Lieber et al. teach identifying a gene responsible for a particular phenotype is crucial to important any biological mechanism and our understanding of disease and teach the use of a library expression system that can identify genes that are specifically involved in producing a particular phenotype by knocking down intracellular expression, one would have clearly been motivated to incorporate a siRNA in the library expression system to identify a functional gene since Tuschl et al. teach using siRNA is more efficient as compared to antisense and ribozyme and siRNAs have been shown to inhibit gene expression in a sequence-specific manner compared to antisense and ribozyme methodologies. One would have a reasonable expectation of success because Lieber et al. teach efficient identification of target genes using hammerhead ribozymes and Tuschl et al. and Kennerdell et al. teach siRNA and more hairpin siRNA can efficiently interfere with gene expression in cells.

Lieber et al., Tuschl et al. nor Kennerdell et al. teach an expression cassette comprising an inducible promoter for transcription of said siRNA and transfection or injection into cells and Lieber et al. does not teach more specific ways of screening the library, such as immobilizing the siRNA onto solid supports.

Barber et al. teach the hairpin RNA is transcribed from an expression cassette (comprises a coding region for said hairpin RNA that is operably linked to a promoter wherein said promoter is an inducible promoter or a RNA polymerase (e.g. T7 polymerase) (see column 10 lines 26-54 and column 35 lines 31-34). Further, Barber et al. teach the hairpin RNA can be stably transfected, with a expression cassette comprising a neomycin resistance gene, into said mammalian cells or microinjected into said mammalian cells (see column 17 lines 32-56 and see Figure 3) wherein said mammalian cells are stem cells (see column 29 lines 36-40) somatic or immortalized human cells (see column 17 and 42, lines 10-22 and 59-67, respectively). Barber et al. additionally teach the library of hairpin RNA can be arrayed on a solid support (see column 33, lines 20-50) or arrayed in wells of multi-well plate (see column 45, lines 45-66).

It would have clearly been obvious to one of ordinary skill in the art to utilize inducible promoters in the expression cassette for transcribing a siRNA. It would have also been obvious to one of skill in the art to transfection the library into mammalian cells or microinject the library into mammalian cells as taught by Barber et al. One of skill in the art would also clearly screen the library for attenuation of gene expression by immobilizing the siRNA onto a support, a process well known in the art for screening nucleic acid.

One of skill in the art would have been motivated to incorporate an inducible promoter into the expression cassette transcribing the siRNA to control the level of expression in cells. One of skill in the art would have been further motivated to

immobilize the siRNA library onto a solid support to efficient screen hairpin RNA for attenuation of gene expression. One would have had a reasonable expectation of success because Barber et al. teach generation of a hairpin RNA library by arraying the RNA onto wells of a plate and efficiently screening for attenuation of expression.

Thus in the absence of evidence to the contrary, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made.

Response to Applicant's Arguments

Re: Claim Rejections - 35 USC § 102

The rejection of record of claims 83-88, 90-100, 102-108, 113-115, 120, 123-124 under 35 U.S.C. 102(e) as being anticipated by Barber et al. (U.S. Patent No. 6,605,429) as evidence by Hammond et al. (Nature 2000) is maintained.

Applicants argue the ribozymes taught by Barber et al. do not teach hairpin RNA "comprising self complementary regions *and* which hybridize to the target gene." It is believed Applicant is arguing the ribozyme taught by Barber et al. does not anticipate the instantly claimed hairpin RNA because the hairpin RNA comprises self-complementary regions that form duplex regions wherein the duplex regions hybridize to the target gene. However, the instant claims do not explicitly state the duplex regions hybridize to the target gene. It is reasonable to interpret the claims wherein the method comprises introducing a hairpin RNA wherein each hairpin RNA species comprises self-complementary sequences that form duplex regions and each hairpin RNA hybridize to

a target gene. Barber et al. teach a RNA comprising a duplex region wherein the RNA hybridizes to a target gene.

Therefore, the rejection of record is maintained.

Re: Claim Rejections - 35 USC § 103

The rejection of record of claims 83-108, 113-115, 120, 123-124 under 35 U.S.C. 103(a) as being unpatentable over Barber et al. (U.S. Patent No. 6,605,429) in view of Good et al. (Gene Therapy 1997), Lipardi et al. (Cell 2001) in further view of Bennett et al. (U.S. Patent No. 5,998,148) and as evidence by Hammond et al. (Nature 2000) is maintained.

Applicant relies on arguments above to state the ribozyme taught by Barber et al. does not anticipate the instantly claimed hairpin RNA because the hairpin RNA comprises self-complementary regions that form duplex regions wherein the duplex regions hybridize to the target gene. As stated above, it is reasonable to interpret the claims wherein the method comprises introducing a hairpin RNA wherein each hairpin RNA species comprises self-complementary sequences that form duplex regions and each hairpin RNA hybridize to a target gene. Barber et al. teach a RNA comprising a duplex region wherein the RNA hybridizes to a target gene.

Applicant argues Lipardi et al. is not properly cited as a reference because the filing date of the date accorded to the instant claims should be 03/16/2001. The instant claims are accorded a priority date of 01/22/2002 for the reasons stated above and therefore Lipardi et al. is properly applied as a reference.

Therefore, the rejection of record is maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Chong whose telephone number is 571-272-3111. The examiner can normally be reached Monday thru Friday between 7-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Paras can be reached at 571-272-4517. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. For more information about the PAIR system, see http://pair-direct.uspto.gov.

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Kimberly Chong
Examiner
Art Unit 1635

SEAN McGARRY
PRIMARY EXAMINER
1635